

415 wherein the filter driver is capable of encrypting audio signals received into the sound card prior to the audio signals being received by the telephony client and transmitted to the network card, and

wherein the filter driver is also capable of decrypting audio signals received by the network card and passed through the telephony client to the filter driver, the decryption occurring prior to transmitting the audio signals to the sound card.

REMARKS

Claims 21-31 have been allowed. Claims 1-20 have been rejected. Accordingly, claims 1-31 remain pending.

Claims 1-12

The Examiner rejected claims 1, 2, 3, 6, 8, 9, 10, and 11 under 35 U.S.C. §102(e) as being anticipated by Saito et al. (6,125,186). The Examiner has rejected claims 4 and 5 under 35 U.S.C. §103(a) as being unpatentable over some combination of primary reference Saito et al. and secondary reference Crick et al. (5,675,793). The Examiner has also rejected claim 7 under 35 U.S.C. §103(a) as being unpatentable over some combination of the primary reference and Kavsan (6,412,069). Further, the Examiner has rejected claim 12 for the same reasons provided in the rejection of claims 1-4.

As amended to further clarify the present invention, independent Claim 1 is directed towards "a computer readable medium containing program instructions for configuring a first computer so that a first telephony client on the first computer may securely communicate with a second telephony client on a second computer via a communication path." The computer readable medium includes "computer code for inserting a security algorithm within the communication path, the security algorithm facilitating secure communication between the first and second telephony clients such that more than a single type of telephony client may be implemented concurrently." (Support for the amendment can be found on pg. 2 line 20 to pg. 3 line 5, among other places). In other words, the computer readable medium contains computer code for inserting a security algorithm within a communication path of different types of concurrently implemented telephony clients for a

secure communication. Independent Claim 8 is a method claim containing method steps and similar limitations for the computer readable medium claim of independent claim 1.

Independent claim 11, as amended, is directed towards "an operating system for use by a processor in directing operation of a computer upon which a first telephony client may execute to communicate with a second telephony client on a second computer via a communication path." The operating system includes "at least one processor-readable medium." The operating system also includes "a program mechanism embedded in the at least one processor-readable medium for causing the processor to facilitate secure communication between the first and second telephony clients such that any combination of types of telephony clients may be implemented concurrently." That is, the operating system includes at least one processor-readable medium with an embedded program mechanism for causing the processor to facilitate secure communication along a communication path between different types of concurrently implemented telephony clients.

Furthermore, independent claim 12 is directed towards "a computer readable medium containing program instructions for a first telephony system to communicate securely with a second telephony system such that more than a single type of telephony client may be implemented concurrently. Claim 12 also requires "the first telephony client being configurable to include a sound card and an associated driver, a general purpose sound driver for interfacing with the sound card's associated driver, a network card and associated driver, a general purpose networking driver for interfacing with the network card's associated driver, a telephony client, an I/O supervisor for interfacing between the telephony client and the general purpose networking and sound drivers." The computer readable medium of claim 12 further includes "computer code for inserting a filter driver between the I/O supervisor and the general purpose sound driver, wherein the filter driver is capable of encrypting audio signals received into the sound card prior to the audio signals being received by the telephony client and transmitted to the network card, and wherein the filter driver is also capable of decrypting audio signals received by the network card and passed through the telephony client to the filter driver, the decryption occurring prior to transmitting the audio signals to the sound card."

The primary reference Saito et al. generally discloses an encryption communication system using an agent and a storage medium for storing that agent. (See Abstract) Although Saito et al. discloses an encryption communication system between two terminals, Saito et al. fails to teach or suggest among other things that different telephony clients can be employed at the same time to facilitate the secure communication in the manner claimed. In other words, as the Examiner pointed out, Saito et al. merely discloses applications (telephony clients) that may include telephone, television conferences, video transmission, etc. (see column 3 lines 43-48; Fig. 1 numeral elements 13 and 16). However, Saito et al. does not disclose whether different applications (telephony clients) may be used concurrently. In fact, Saito et al. explicitly discloses that the applications are the same at both terminals (see column 3 lines 52-53). In sum, Saito et al. discloses an encryption communication system using an agent that is coupled to a specific type of application (telephony client) and not to MORE THAN A SINGLE TYPE of applications (telephony clients). Therefore, Saito et al. fails to teach or to suggest inserting a security algorithm within a communication path of different types of concurrently implemented telephony clients for a secure communication thereof, in the manner claimed.

The secondary references Crick et al. and Kavsan are respectively directed towards dynamic allocation of a common buffer for use by a set of software routines and towards extending cryptographic services to the kernel space of a computer operating system. Crick et al. merely teaches allocating memory for a plurality of software routines into a software system having a layered architecture. (see Abstract) On the other hand, Kavsan merely teaches Kavsan's cryptographic service software is situated in kernel space of the operating system. (see column 2 lines 50-67) The secondary references fail to teach or suggest inserting a security algorithm within a communication path of different types of concurrently implemented telephony clients for a secure communication thereof, in the manner claimed.

Accordingly, since the cited references fails to teach or suggest inserting a security algorithm within a communication path of different types of concurrently implemented telephony clients for a secure communication thereof, it is respectfully submitted that claims 1, 8, 11, and 12 are patentable over the cited references.

Claims 13-20:

The Examiner rejected claims 13 and 14 under 35 U.S.C. §102(e) as being anticipated by Clapp et al. (US 2002/0087761 A1).

Independent Claim 13 is directed towards a computer readable medium containing programming instructions for a first telephony client having an associated formatting module to communicate securely with a second telephony client. Claim 13 also requires:

- (a) computer code for receiving audio signals from an audio input device;
- (b) computer code for encrypting the received audio signals independently of the formatting module associated with the first telephony client; and
- (c) computer code for outputting the encrypted audio signals for transmission to the second telephony client.

In contrast, Clapp et al. merely teaches an audio/visual communication system that communicates with analog and digital communication channels for transmitting video, audio, and other information acquired from a local conferencing site, and receiving audio and video information from a remote conferencing site. Although Clapp et al. also teaches using a visual conferencing application software to enhance the functionality of the audio/visual communication system (e.g. FIG. 13 step 726 to encrypt and/or compress the data file prior to transmission), Clapp et al. fails to teach or suggest among other things using computer code for encrypting the received audio signals independently of the formatting module associated with the first telephony client, in the manner claimed. Instead, Clapp et al. discloses having functions, such as encrypting a data file, performed by the video conferencing application software as provided in step 726 of FIG. 13. That is, the encryption is done dependently of the video conferencing application software, which suggests that the encryption is not independent of the video conferencing application software's formatting module. (See Fig. 13; pg. 10 paragraphs 81 and 85) Since Clapp et al. fails to teach or suggest encrypting independently of the formatting module, it is respectfully submitted that claim 13 is patentable over Clapp et al.

The Examiner's rejections of the dependent claims are respectfully traversed. However, to expedite prosecution, all of these claims will not be argued separately. Claims 2-7 and 9-10 each depend either directly or indirectly from independent claims 1 or 8 and, therefore, are respectfully

submitted to be patentable over cited art for at least the reasons set forth above with respect to claims 1 or 8. Claims 14-20 each depend either directly or indirectly from independent claim 13 and, therefore, are respectfully submitted to be patentable over cited art for at least the reasons set forth above with respect to claim 13. Further, the dependent claims require additional elements that when considered in context of the claimed inventions further patentably distinguish the invention from the cited art.

Drawings:

The Draftsperson objected to the submitted drawings 1-4. Applicant hereby respectfully defers submission of corrected drawings until a receipt of a Notice of Allowance for this application from the Examiner.

Summary

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

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